bio-protocol Preprint

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Promoter Sequences

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An abbreviated version of this protocol was published in Science Advances in Nov 2020

Transcriptional priming as a conserved mechanism of lineage diversification in the developing mouse and human neocortex

DOI: 10.1126/sciadv.abd2068

Detailed protocol

In this study, we used the proximal promoter regions of a number of RGC and IPC enriched genes to drive reporter gene expression directly or indirectly via Cre or Flpe dependent recombination to label and assess the distribution and morphology of subclasses neuron producing progenitors during midneurogenesis.
Specifically, the gene regulatory elements cloned and used were:

mouse Tbr2 (Eomes) promoter (~2.5kb fragment)
Mus musculus strain C57BL/6J chromosome 9, GRCm39
BP Range: 118305185 to 118307727 plus strand

mouse Neurod4 promoter (~2.5kb fragment)
Mus musculus strain C57BL/6J chromosome 10, GRCm39
BP Range: 130118551 to 130116045 minus strand

mouse Hes1 promoter (~2.5kb fragment)
Mus musculus strain C57BL/6J chromosome 16, GRCm39
BP Range: 29881675 to 29884174 plus strand

mouse Fabp7 (Blbp) promoter (~1.7kb)
Mus musculus strain C57BL/6J chromosome 10, GRCm39
BP Range: 57659490 to 5766104 plus strand

Human Slc1a3 (Glast) promoter (~2.1kb fragment)
Homo sapiens chromosome 5, GRCh38.p13 Primary Assembly
BP Range: 36604636 to 36606704 plus strand

How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Haydar, T. (2020). Promoter Sequences. Bio-protocol Preprint. bio-protocol.org/prep640.
2. Li, Z., Tyler, W. A., Zeldich, E., Baró, G. S., Okamoto, M., Gao, T., Li, M., Sestan, N. and Haydar, T. F.(2020). Transcriptional priming as a conserved mechanism of lineage diversification in the developing mouse and human neocortex. Science Advances 6(45). DOI: 10.1126/sciadv.abd2068

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